

**BALANCING ASSEMBLY FOR ROTATING
CYLINDRICAL STRUCTURES**

ABSTRACT OF THE DISCLOSURE

The present invention provides an apparatus and a method for compensating for small variations in balance and alignment when supporting and rotating a massive cylindrical drum. The apparatus comprises a self-aligning flange having projections spaced 90° apart about the circumference, or rim, of the flange. The projections are inserted into sliding relationship with elongate slots within a fixed supporting frame so that the plane of the self-aligning flange is allowed to dynamically adjust to small oscillations or movements of the centerline of the rotating drum as it rotates.